

### **Summary**

### YOUR RESPONSIBILITY:

### To make sure PITs are kept in safe condition and properly serviced



### References:

- > Appropriate respiratory protection may need to be used when operating PITs. See chapter 296-841 WAC, Respiratory Hazards, for more information.
- Appropriate PPE may need to be worn. See WAC 296-800-160 in the Safety and Health Core Rules for more information.

### You must

### Inspect, repair and maintain PITs

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### **Summary**

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# Repair and Maintenance



## Inspection, Repair, Maintenance, and Servicing

WAC 296-863-300

### Rule

### WAC 296-863-30005

### Make sure PITs are in safe working condition

- Remove any PIT from service that's not in safe operating condition.
- Immediately remove PITs from service that have any of the following problems, and don't return them to service until the cause of the problem has been eliminated:
  - A leak in the fuel system.
  - A clogged water muffler screen or other muffler part.
  - An exhaust system that's emitting hazardous sparks or flames.
  - A part that's hotter than its normal operating temperature thus creating a hazardous condition.

### Rule

### WAC 296-863-30010

### **Inspect your PITs**

### You must

- Inspect PITs according to the manufacturer's instructions.
- Inspect PITs at these times:
  - Daily before being put into service and
  - After each shift, if the PIT is used on a continuous (24-hour) basis.



### Note:

You can designate someone on the off-going shift, on-coming shift, or some other person to do the inspection.

### You must

Report and correct any deficiencies noted during the inspection.



### Rule

### WAC 296-863-30015

### Meet these requirements when repairing PITs

### You must

- Make sure repairs are made by authorized persons.
- Make sure replacement parts are equivalent to the parts used in the original design.
- Make sure repairs aren't made in Class I, II, or III locations. See Tables 1, 2, and 3 for more information.



### Definitions:

- **Class I locations** are areas where flammable gases or vapors are, or may be, present in the air in quantities sufficient to produce explosive or ignitible mixtures.
- **Class II locations** are areas where the presence of combustible dust could be sufficient to produce explosions.
- **Class III locations** are areas where the presence of easily ignitible fibers are suspended in the air but aren't in large enough quantities to produce ignitible mixtures.

### You must

- Make sure fuel and ignition system repairs that involve fire hazards are made only in locations designated for such repairs.
- Disconnect the battery before starting repairs to a PIT electrical system.
- Close the fuel container shutoff valve before repairing an LP-gas fueled PIT in a garage.



### **Exemption:**

The container shutoff valve may be left open if it's necessary to run the engine.

### Rule

WAC 296-863-30020

**Maintain your PITs properly** 

- Maintain PITs according to this chapter and the manufacturer's instructions.
- Keep PITs:
  - Clean
  - Free of excess lint, oil, and grease.
- Take appropriate precautions to protect employees from the hazards associated with the cleaning agents or solvents used.
  - Precautions could include methods such as ventilation.
- Make sure solvents used for cleaning PITs have a flash point of 100° F or more.

Rule

### WAC 296-863-30025

### Service gasoline fueled PITs safely

### You must

 Handle and store liquid fuels, such as gasoline and diesel fuel, according to the National Fire Protection Association Flammable and Combustible Liquids Code (NFPA No. 30-1996).



### Note:

- National Fire Protection Association codes are available by:
  - Purchasing copies by writing:

National Fire Protection Association

1 Batterymarch Park

Quincy, MA 02169-7471

or

- Contacting the NFPA website at www.nfpa.org.

- Stop the engine before filling a fuel tank.
- Avoid spilling fuel during servicing.
- Make sure you do **not** use open flames to check the gasoline level in fuel tanks.
- Do the following before restarting the engine after fueling:
  - Put on the fuel tank cap.
  - Make sure spilled oil or fuel is completely washed away or evaporated.



### Rule

### WAC 296-863-30030

### Service liquefied petroleum gas (LPG) fueled PITs safely

### You must

- Handle and store liquefied petroleum gas fuel according to the National Fire Protection Association Storage and Handling of Liquefied Petroleum Gases (NFPA No. 58-1998).
- Shut down the engine while fueling.
- Fuel PITs equipped with permanently mounted fuel containers outdoors.
- Make sure filling fuel containers from industrial bulk storage containers is done at least:
  - 10 feet from the nearest masonry-walled building
  - 25 feet from the nearest building or other construction
  - 25 feet from any building opening.
- Make sure PITs are stored or serviced inside garages only when:
  - There are no leaks in the fuel system and
  - The fuel tanks aren't filled beyond the maximum filling density specified in WAC 296-24-47505 (12)(a), Storage and handling of liquefied petroleum gases.



### Reference:

See Chapter 296-24 WAC, Part F-1, for LPG charging equipment requirements and maximum filling density and LPG service stations.

### Rule

### WAC 296-863-30035

### Make sure battery charging areas are safe

- Make sure battery charging areas are designated and provided with all of the following:
  - Means to flush and neutralize spilled electrolyte
  - Fire protection
  - Ventilation that's adequate to disperse fumes from gassing batteries.
- Prohibit smoking in battery charging areas.
- Take precautions to prevent open flames, sparks, or electric arcs in battery charging areas.
- Protect battery charging equipment from being damaged by PITs.
- Provide at least one of the following to handle batteries:
  - Conveyor
  - Overhead hoist
  - Other equivalent material handling equipment.





### Rule

### WAC 296-863-30040

### Service batteries for electric PITs safely

- Make sure PITs are properly positioned with the brake on before charging or changing batteries.
- Make sure you do **not** use open flames to check the electrolyte level in storage batteries.
- Do the following when charging batteries:
  - Make sure vent caps are functioning
  - Open the battery or compartment covers to dissipate heat
  - Pour acid into water, never pour water into acid.
- Provide a carboy tilter or siphon to handle electrolyte.
- Keep tools and other metallic objects away from the top of uncovered batteries.
- Make sure reinstalled batteries are properly positioned and secured.